T 171 . C 2845

CARNEGIE

CARNEGIE INSTITUTE CARNEGIE
INSTITUTE OF TECHNOLOGY

CARNEGIE LIBRARY

VOLUME XXI PITTSBURGH, PA., JANUARY 1948 NUMBER 6



TREE PORTRAIT BY CHARLES GILBERT
Popular Prize Award
in Painting in the United States, 1947
(See Page 168)

PUBLISHED MONTHLY EXCEPT AUGUST AND SEPTEMBER IN THE INTEREST OF CARNEGIE INSTITUTE, CARNEGIE INSTITUTE OF TECHNOLOGY, AND CARNEGIE LIBRARY, PITTSBURGH, PA. SUBSCRIPTION PRICE, TWO DOLLARS A YEAR; SINGLE COPY, TWENTY-FIVE CENTS.

OFFICE OF THE PRESIDENT CARNEGIE INSTITUTE

WILLIAM FREW, Editor
JEANNETTE F. SENEFF, Editorial Assistant

VOLUME XXI

NUMBER 6

JANUARY 1948

-0 D

TO ALL

A happy new year! A happy new year to my dear country, the land of old integrity and truth! A happy new year to friends and enemies, Christians and Turks, Hottentots and Cannibals! To all on whom God permits his sun to rise and his rain to fall!

MATTHIAS CLAUDIUS

OUR HOST

Time is like a fashionable host,
That slightly shakes his parting guest by th'
hand,
But with his arms outstretch'd, as he would fly,
Grasps in the comer: Welcome ever smiles,
And Farewell goes out sighing.

SHAKESPEARE

CARNEGIE LIBRARY

Hours: 9:00 A.M. to 10:00 P.M., weekdays 2:00 to 6:00 P.M., Sundays

•3 D•

Exhibit of work
after "Painting in the United States, 1947"
by the advanced art students of
Peabody High School
Jean Thoburn, instructor
Lobby, Carnegie Library of Pittsburgh

≪ ₽• Storytelling

10:30 a.m., Central Boys and Girls Room
For children six to twelve years old—
every Saturday morning.
For children three to five years old—
Wednesday, January 7, with
Alice T. McGirr speaking to the mothers on
"The Reference Department for Information"
and Wednesday, January 21, with

and Wednesday, January 21, with Irene Millen speaking to the mothers on "Music in the Library"

CARNEGIE INSTITUTE 4400 FORBES STREET

Hours: 10:00 A.M. to 6:00 P.M., weekdays 2:00 to 6:00 P.M., Sundays

Carnegie Institute broadcasts Each Tuesday, 6:45 P.M., from WCAE

FINE ARTS AND MUSEUM SOCIETY
"Wild Beast Adventures on Three Continents"
Moving pictures in color
by Dr. Gustav Grahn
Monday, February 2, 8:15 p.m.
Carnegie Music Hall

(Seats reserved for members until 8:10 p.m.)
FINE ARTS GALLERIES

Galleries open until 10:00 P.M., weekdays January 15 to February 22

Contemporary Drawings from the Permanent Collection January 2—February 8

Paintings by Walt Kuhn January 8—February 15

Pennsylvania as Artists See It The Gimbel Pennsylvania Art Collection January 15—February 22

MUSEUM

Illustrated Lectures Sundays, 2:30 p.m., Lecture Hall (Seats reserved for members of the Fine Arts and Museum Society until 2:20 p.m.)

JANUARY 11—"I Shot the Globe"

John Moyer Chicago Natural History Museum 18—"In Search of Ancient Man in Utah" David W. Rial

Carnegie Museum 25—"Trees" O. E. Jennings Carnegie Museum

> Free moving pictures for children Natural history subjects and cartoons Saturdays, 2:15 p.m., Lecture Hall

> > MUSIC HALL

Organ recitals by Marshall Bidwell Saturdays at 8:15 P.M. Sundays at 4:00 P.M. Sunday recitals broadcast from WPGH

January 4—Young People's Program

January 10
Stephen Collins Foster Memorial Program
held in collaboration with the
Civic Club of Allegheny County

EARLY AMERICAN HUNTING RIFLES

By DONALD BAIRD

Section of Archeology and Ethnology, Carnegie Museum

A comparison of muzzle-loading rifles used by hunters in this country during most of the eighteenth and nineteenth centuries is offered in a case of guns now on display in the Section of Archeology and

Ethnology on the third floor of the Car-

negie Museum.

Here modern riflemen can see how the early Pennsylvania flintlock long rifle developed into the Kentucky rifle of the pioneers and later evolved into the halfstock Kentucky and distinctive Plains rifles of the expanding West. Included in the group are products of the 1750 Lancaster gunshop, the 1850 Pittsburgh factory, and the timeless Kentucky mountain smithy; here are rifles made—lock, stock, and barrel—by a single craftsman or assembled from "boughten" parts. Historic powder horns, bullet molds, and other shooting accessories round out the display.

Earliest of these pieces is the long Pennsylvania flintlock (1), an unsigned example of the truly American frontier rifle adapted from German-Swiss originals by immigrant gunsmiths in Lancaster County. Several characteristics of the early period point to a date of about 1750. Unfortunately the original lock wore out or broke and was long ago replaced by an early nineteenth-century lock; at about the same time the rifling grooves in the soft steel barrel wore smooth and were bored out entirely. A rifle rebored smooth, however, lost its superiority over the wild-shooting colonial muskets displayed in nearby cases. The provincial rifleman could



KENTUCKY PISTOL FOR EMERGENCIES

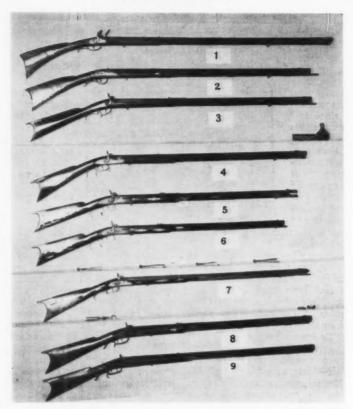
drop Indians and Redcoats consistently at two hundred yards, but even a well-trained musketeer rarely hit his mark at half that range.

To load his rifle the hunter placed a soft lead ball in the palm of his

hand, then uncorked his powder horn and poured out enough black powder to cover the ball. This powder charge he emptied into the upturned muzzle of the rifle. Next he took from the brasslidded patchbox in the stock a circle of greased cloth or buckskin, placed it across the muzzle, and seated the lead ball in the middle. Withdrawing the ramrod from its socket under the barrel, he drove the ball and its greased wrapper down onto the powder in the breech. Now loaded, the rifle needed only a pinch of priming powder in the flashpan to be ready to fire. Two shots a minute was considered fast shooting for a Pennsylvania rifle, though it seems dead slow in this day of rifles that reload themselves before the bullet strikes its mark.

Through association with Daniel Boone and the colorful frontiersmen, these Pennsylvania-made rifles, distinctive with their long octagon barrels, ornamental brass mountings, and fullstocks of curly maple, became known as Kentucky rifles. Originally ignited by flint and steel, many such Pennsylvania-Kentucky rifles (2, 10, 11) were altered after 1820 to use the newfangled surfire percussion caps, little copper primers containing mercury fulminate.

Of special interest to arms collectors is the unusual Kentucky pistol, a by-

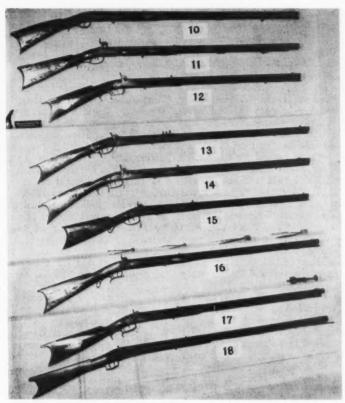


RIFLES ON DISPLAY AT THE CARNEGIE MUSEUM

product of the rifle-making trade. Compare the rifled octagon barrel, rifle lock, curly maple stock, and hair trigger of this pistol with those of the nearby rifles, and its origin becomes evident. Intended for emergency use while the hunter was reloading his long rifle, these pistols were probably ordered with the rifle and rarely bear the maker's name. The stamp GOLCHER on the lockplate gives us no clue to the gunsmith, for most American gunmakers did not make their own locks but bought them from eastern or European factories.

frontier, a new style of rifle became popular. The prairie hunters and Rocky Mountain trappers who used this Plains rifle (17) demanded a compact rifle for use in the saddle, a gun with Kentucky rifle accuracy but without the Kentucky's cumbersome length and fragile, pin-fastened fullstock. Similar arms, plain but sturdy, were produced in quantity for the Indian trade by eastern manufacturers, especially Leman of Lancaster (9).

Though halfstocks, shorter barrels, and pea-sized calibers were all the fashion, fullstock Kentucky rifles (3, With the expansion of the western 12) were still being made even in the



THE ACCOMPANYING ARTICLE CLASSIFIES THE RIFLES

late nineteenth century. Families of gunsmiths produced distinctive variants on the Kentucky and Plains patterns—compare the work of the Bensons (4, 5, 6) with that of the Shreckengosts (13, 14). Metropolitan factories like Krider's in Philadelphia (15) and the Enterprise Gun Works in Pittsburgh (8) turned out standardized precision-made rifles, but back in the southern mountains, gunsmiths like Joab Helton (18) were still making crude rifles by the old hand

By Civil War time, however, the muzzle-loading rifle was rapidly being crowded out by breech-loading, metal-

methods.

lic cartridge rifles. Standarized, machine-made arms and ammunition eclipsed the custom-made handicraft of the private gunshop, and Granddad's old turkey rifle was stored in the attic or given to the museum. Almost all the guns shown, including the outstanding Snyder collection of percussion rifles in practically new condition, were gifts.

Through this display of early American hunting rifles we can appreciate the craftsmanship and individuality of the old-time gunsmiths; we can sense the spirit of other, earlier hunters who sighted at deer, bear, and squirrel down long octagon barrels.

CALLING ALL HUNTERS!

By Harold J. Clement
Associate Preparator of Mammals, Carnegie Museum

In his book, Pennsylvania Deer and Their Horns, Henry W. Shoemaker has painstakingly recorded many remarkable sets of white-tailed-deer antlers taken in this state before 1900. These old antlers are interesting because they were carried by the native stags of the Seven Mountains of the Alleghenies and in the Black Forest. During the final twenty-five years of the last century these animals were hunted mercilessly by a steadily increasing band of market-hunters and sportsmen who literally dogged their trails the year round. The last band of these deer made their stand in the Black Forest of north central Pennsylvania, and by 1900 only a few individuals remained alive.

When the Pennsylvania hunters finally realized the situation, meat hunters and sportsmen worked side by side to increase the herds. The legal hunting season was shortened to a few days in early winter, hunting with hounds was forbidden, only one buck a year was allowed each hunter, and the sale of venison was made illegal. As a final touch and to accelerate the process, five healthy white-tailed deer from Michigan and the Adirondacks were released in the forest lands of the commonwealth. For about ten years the experiment was eagerly watched by the venison-hungry hunters, and from a low of one hundred fifty animals killed in 1898 there was a gradual increase until, in 1912, a thousand stags were killed. The deer herds had been restored, but just what proportion of the new herds were native stock, and what part were offspring of the imported animals could not be easily checked by the average Nimrod.

The antlers of mature white-tail stags have always been prized trophies of the hunt. Even men who make a living by

shooting the animals for market often keep a few sets of the finest antlers from the stags they kill. So it is understandable that many deer-hunters are interested in any noticeable change in antler forms caused by crossing the native deer of the state with the animals brought in from outlying areas.

Mr. Shoemaker's interest in these trophies dates back to 1898, when he measured and photographed the head of a giant stag killed in High Valley by Samuel Strohecker in 1896. This massive set of antlers, which is considered by Mr. Shoemaker to be the finest ever grown by a Pennsylvania white-tailed deer, has unfortunately disappeared.

Too often other noteworthy old sets of antlers, prized only as hunting trophies by their owners, are discarded when the heirs are exclaiming at all the "junk" Grandpa accumulated. This can be understood when families are scattered and do not have room for even the most prized heirlooms, but it is to be hoped that some of the best of these trophies will find their way into institutions which can preserve them. In this way many personally prized possessions finally fit into a broader pattern, and Grandfather's old deer head, which has been a dust-catcher to the family for many years, may be found to be one of the stags from Pennsylvania's old native stock.

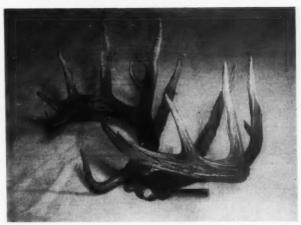
One method of deer-hunting may still be practised at any time of the year without regard for a bag limit. It does not even necessitate a trip into the mountains. Personally I have bagged two or three stags in an afternoon's hunt through the secondhand stores not too far from my home. The charm of such hunting lies in the fact that occasionally a fine old head may peep out

at you from behind a broken sewing machine or ice-cream freezer. Sometimes an examination of these castaways will be rewarded by the discovery of valuable data that dates them and tells where the stags were killed. It was customary for some of the early taxidermists to tack their cards on the backs of the panels on which the mounted deer heads were

My prize buck was bagged in 1933 on South Highland Avenue, East Liberty, where a pleasant old gentleman sold antique clocks and carved wooden bric-a-brac. He knew, however, that the antlers I admired were fine old ones and asked a fair price for them, assuring me that they were from a deer killed by a Pittsburgh man long since dead and gone. He believed it had been killed near Kane although he was not quite certain. For several months I watched the antlers until I could spare the needed amount, and then one day the long stalk ended!

These antlers are heavy ones with extremely long brow tines and nicely curved beams. Tiny protuberances called beads, too small to count as points, cover the lower half of each antler, and a few odd points give the set an individual look. The spread of 24 inches makes it large for a Pennsylvania stag. The only flaw in the antlers is a small third horn that grows out beside the right antler and makes a little curve over the forehead.

Having once seen this head, no one with an interest in antlers would ever mistake it. I am still showing it to my oldest deer-hunting friends, hoping that one of them may have seen it before it reached the antique shop, because I



PRIZE TROPHY TAKEN BY MR. CLEMENT WITHIN CITY LIMITS

should like to be certain it was carried by a Black Forest stag.

MUSIC AT NOON

Many working men and women are enjoying recorded music during lunch hour at the Homewood Branch, Carnegie Library of Pittsburgh. The programs are selected by Irene Millen, head of the Music Division at Central Library.

ANNALS OF THE CARNEGIE MUSEUM

VOLUME XXX

ART. 9—Smith, Hobart M. Additions to the list of Mexican amphibians and reptiles in the Carnegic Museum, p. 89-92. 5c.

negic Museum, p. 89-92. 5c.
Art. 10—Allen, Glover M. A second specimen of an African Bat, *Plerotes anchietae* (Seabra), p. 93-95. 3 figs. 5c.

93-95, 3 figs. 5c. Art. 11—Webster, Frederic S. The birth of habitat bird groups, p. 97-118, 11 pls. 50c.

bird groups, p. 97-118, 11 pls. 50c. Art. 12—Eller, E. R. Scolecodonts from the Trenton series (Ordovician) of Ontario, Quebec, and New York, p. 119-212, 7 pls. 75c.

and New York, p. 119-212, 7 pls. 75c.
ART. 13—Henry, LeRoy K. A review of the
Boletes (Fungi) of western Pennsylvania, p.
213-240, 3 pls. 35c.

ART. 14—Orton, Grace L. Larval development of the Eastern Narrow-mouthed Frog, Microbyla carolinensis (Holbrook), in Louisiana, p. 241-248, 1 pl. 15c. ART. 15—Microw, Dorothy. A distributional

ART. 15—Microw, Dorothy. A distributional study of the Pine Siskin, p. 249-261. 10c.

POPULAR CHOICE: "TREE PORTRAIT"

THARLES GILBERT'S painting, Tree Portrait, was voted the Popular Prize of \$200 in the exhibition, Painting in the United States, 1947. Winter by Carl Wuermer was the runner-up, and Afternoon by Andrew Wyeth was

The next ten paintings in order of the number of votes received were: Portrait of Miss Elizabeth Dilworth by John Koch, Alice in Gray by Luigi Lucioni, Emma by Malcolm Parcell, The Unmade Bed by Priscilla W. Roberts, Peggy Cummins by Henriette Wyeth, Of Ants and Men by Abe Weiner, Joe Magarac by William Gropper, Storm over the Valley by James F. Ashley, Yesterday, Today and Tomorrow by Ernest Fiene, and The Song of the Mariners by Robert

Brackman.

With Tree Portrait Charles Gilbert was making his third appearance in a Carnegie Institute exhibition. His first was in Directions in American Painting in 1941, and he was invited for Painting in the United States, 1946 and 1947. The artist was born in Texas in 1899, spent his youth in Louisiana, and his art career in New York City. He now divides his time between New York and his studio in the mountains of North Carolina. He was graduated from the Virginia Military Institute but later chose art instead of a military career. He studied professionally in New York at Columbia University, at the Parsons School of Design, and later at the Art Students League. For a time he lived and studied and painted in Europe, chiefly in France and Italy. He spent two years in the Army as a Major in the Corps of Engineers in World War II, working in camouflage and other troop training.

Charles Gilbert has done mural painting in private residences, clubs, on the steamship America, and at the Chicago Century of Progress Exposition. He has designed wallpapers, textiles, and interiors. For three years he was instructor in painting and graphic design at Cooper Union. As an easel painter he works in oil, tempera, and gouache. He exhibited in the Virginia Museum of Fine Arts Biennial Exhibition in 1942. in the Artists for Victory Exhibition at the Metropolitan Museum of Art in the same year, in the Portrait of America exhibition in 1945, and in the Whitney Museum of American Art Annual in 1947. The Popular Prize at Carnegie Institute is not the first such prize Charles Gilbert has received, because he was voted New York's favorite in the Portrait of America exhibition in 1945.

Tree Portrait was painted in the summer of 1942. It was started in Maine and completed two months later at the artist's studio in the North Carolina mountains. The picture was finished just before he entered the Army. It is a portrait, the subject being Charles Rain, a fellow artist, who was also represented in Painting in the United States, 1947, by The Prophetic Dream. It is not, however, in any sense a formal portrait of Charles Rain. The composite title came from the fact that the figure was intentionally subordinated to the setting and mood of nature in midsummer. The idea was inspired by the dead apple tree, weathered silver, with its beautiful rhythms. The aim, according to the artist, was to depict a classic serenity of mood-rapt, reminiscent, and slightly brooding-symbolic of the lyric bond between man and nature.

Each one of the three hundred pictures in Painting in the United States, 1947 was eligible for the Popular Prize. The award was determined by the vote of visitors to the art galleries from November 16 through November 30. Each visitor during that period was given a ballot and was asked to designate according to his own taste and standard of criticism the picture he considered best in the exhibition. —J. O'C., JR.

A CENTURY OF AMERICAN STAMPS

By Grafton M. Darby Honorary Curator of Philatelics, Carnegie Museum

NE hundred years ago our Government brought forth its first issue of adhesive postage stamps under an Act of Congress of March 3, 1847. Two denominations, a five-cent brown and a ten-cent black, were placed on sale at the New York Post Office on July 1, 1847, in Boston on July 2, and Philadelphia on July 7. They were distributed

from time to time to other large and important post offices. Many were used for smaller towns, having been brought in by visitors. It was not until August 8 that they went on sale at Pittsburgh. Produced by Rawdon,

Wright, Hatch & Edson under government contract, they were issued in panes of one hundred each and were not perforated but were usually cut apart

by the use of scissors.

Prior to July 1, 1847, postmasters in some cities issued their own stamps. They were known as "Postmasters' Provisionals," and today many are great rarities. Among those best known to the collector of United States stamps are the five-cent New York, the fiveand ten-cent Providence, and the fiveten-, and twenty-cent values of St. Louis. Up to July 1, 1847, and continuing for some years afterward in some localities, envelopes or folded letter sheets were marked "Paid" when the postage was prepaid, or "Due" if the fee was to be collected at the place of delivery. The postmark of the town was usually added and in most cases the amount of postage and the date were shown. These were designated as

"Stampless Covers" at that time.

New rates were established by Act of Congress on March 1, 1851, effective June 30 of that year, and new denominations were added. Many changes have been made since that time, so that today we are all aware of the great benefits derived from the use of prepaid postage. Most of the credit for cheap postage

goes to Sir Rowland Hill, who fathered the British penny post in 1840.

The one hundredth anniversary of United States postage was celebrated by a great exhibition held in Grand Central Palace, New York,



OUR FIRST POSTAGE STAMPS

from May 7 to May 25, 1947. In compliment thereto the Post Office Department issued a souvenir sheet with reproductions of our first stamps but in different colors, also a three-cent adhesive and a five-cent airmail embossed

envelope.

Here at the Carnegie Museum we have the beginning of a fine collection of the stamps of the entire world. It is housed in loose-leaf specialized Scott Albums. Pages are removed from time to time for display purposes in the room adjoining the Museum Director's office. We are greatly indebted to Carl H. Borntraeger for the great collection of nineteenth-century stamps of Asia and Africa which he gave to the Museum in 1946. This year his gift of nineteenthcentury stamps of Europe was added to our collection. These two gifts, together with a general collection of about eighteen thousand stamps of the world purchased for the Museum by Dr.

George H. Clapp, will provide a great deal of work for the members of the Museum Committee of The Philatelic Society of Pittsburgh, who so willingly give their time and services to this

The collections donated by Mr. Borntraeger were formed from early youth by him and his late brother Henry. There are many of the nineteenthcentury rarities in beautiful condition and they add many thousands of dollars of value to our philatelic holdings. It is interesting to note that Mr. Borntraeger's father was one of Andrew Carnegie's early associates, being with the original firm of The Union Iron Mills back in the year 1868.

The Museum has received gifts of stamps and covers from interested persons, and through this medium many empty spaces have been filled. It is regrettable that many stamps have been removed from the original covers. This is especially true of the early issues, as the markings on the covers often are of historical interest. The finances of the Museum prevent any substantial amount of money being used for the purpose of enlarging the collection and purchasing new stamps as they are issued. It is to be hoped that other friends of the Museum will contribute funds and material so that the collection may be more nearly completed. It is quite surprising what one may uncover up in the attic.

A A TREASURE CHEST P. D.

What was the most abundant bird on the North American continent within historic times, the species with the largest number of individuals in the aggregate? If we are to believe the early writers, it must have been the passenger pigeon, the wild representative of a family of birds of which the domestic

pigeon is a familiar example.

The pigeon's onetime breeding range comsouthern Canada and the northern United States as far west as the edge of the Great Plains. Within this area it was concentrated in scattered nesting grounds or 'cities' of unbelievably vast extent, some of them covering hundreds of square miles. Accounts have come down to us of certain of these nesting colonies that were located in the northern counties of Pennsylvania. One such colony, along the upper Allegheny River, was conservatively estimated to number twenty million birds. "Every tree would be loaded with nests, placed in all available situations. A hundred nests have been counted on a single

Extraordinary as was the nesting economy of the passenger pigeon, its spectacular flights in migration filled the early American settlers with awe. Alexander Wilson, writing in 1832, described one such flight that passed over him while on his way to Frankfort, Kentucky. He attempted to estimate the number of birds in this flight on the basis of its being a mile wide, with three birds to each square yard, and of its requiring four hours to pass, at the rate of a mile a minute. His estimate that this great mass of birds contained the incredible number of 2,230,272,000 individuals was very probably a conservative one. Audubon gives a similar account based on his experiences. One is perfectly justified in concluding that the total passenger pigeon population of that day must have stood at a number in eleven figures—

possibly more.

These mighty hosts are gone now-a victim to the cupidity of the professional "pigeoners and commercial interests that stood to profit from the wholesale slaughter. The men now living who can recall the palmy days of the seventies, when the destruction was at its height, are becoming increasingly few. Forty years have gone by since the last wild passenger pigeon was seen by a reputable ornithologist. The innumerable multitudes of pigeons that once darkened the sky have vanished, never to return, but fortunately there remain some relics to satisfy our curiosity as to the outward appearance of the birds.

Among the most highly prized treasures of the Carnegie Museum are a series of sixteen specimens of this species, representing adults of both sexes and the young bird. Three males are mounted and on display in the Gallery of Birds—one in the synoptic series, one in the Northern American series, and one in the Pennsylvania series. The remaining specimens are being duly cared for in the Laboratory of Ornithology, together with other representa-tives of the vanishing wild life of North America and elsewhere. W. E. C. T.

THE FINE ARTS AND MUSEUM SOCIETY



WHAT is the goal of the Fine Arts and Museum Society of Carnegie Institute? How many members does it need? This question is heard constantly in the

Society's office. It is a good question and an intelligent one, a question to which everyone should have the correct answer.

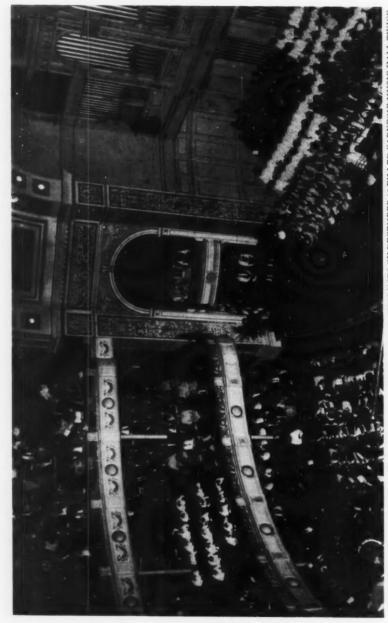
Over a period of the past fifteen years Carnegie Institute has been confronted with an ever-diminishing income resulting from the smaller interest now available on reinvested capital. At present there is a variance of more than seventy-five thousand dollars between the income Carnegie Institute used to have and what it has today. The Fine Arts and Museum Society was formed with the idea of supplying this deficiency. Translated into terms of membership, this means that thousands more memberships are needed. The Society is a long way from its goal.

The Fine Arts and Museum Society, however, is still young. After just four months there are over 1,200 enrolled, and the membership is increasing steadily day by day. Many new members may be ascribed to the good work on the part of those who already have joined. These have told their friends of the privileges members enjoy and have also emphasized that membership is important if Carnegie Institute is to continue to operate as it has in the past on a full-scale basis. There is no more effective means of disseminating information than by word of mouth. Today the mails are carrying a capacity of literature relating to worth-while projects, which receive no more than a cursory glance, so that the messages they carry are not fully understood or appreciated. A loyal and interested member of The Fine Arts and Museum

Society can explain the situation fully to a friend or acquaintance, can answer questions that may puzzle him: for example, can clarify that, whereas the Carnegie Library of Pittsburgh is supported by funds appropriated by the city, no such support is available to the Fine Arts and Museum departments; or explain, if it is not quite clear, why these departments are considered so important to the Pittsburgh school systems. Perhaps it is not understood that study at the Carnegie Institute is an integral part of the school curriculum and one of the reasons for the high standing of the Pittsburgh schools. The Fine Arts and Museum Society is most grateful for these self-appointed "am-bassadors of good will" and sincerely hopes that all its members will try and interest their friends and acquaintances in this important project.

Several requests already have been received asking for the formation of special hobby groups, and, after enjoying "Exploring the Canadian Rockies" last month, members are expressing interest in having another illustrated lecture. Plans for both the hobby groups and a lecture series are under way. The ever-popular Sundayafternoon lecture series starts in January, and members will be given the opportunity of selecting the best seats before the doors open to the general public a little while before the lectures

Joining the Fine Arts and Museum Society of Carnegie Institute is a simple process. All one need do is to apply. There are many types of membership to select from: in the annual group, memberships range in price from two dollars for students, through five, fifteen, twenty-five, one hundred to one thousand dollars. If it is successfully to reach its goal the Society still needs at least 8,800 additional members by next



THE ELEVENTH CHRISTMAS CAROL FESTIVAL OF TWENTY-FOUR CHORUSES ON DECEMBER 14 FILLED CARNEGIE MUSIC HALL TWICE

PENNSYLVANIA MAMMAL SURVEY

By J. Kenneth Doutt Curator of Mammalogy, Carnegie Museum

During 1947 we have continued to make progress on our survey of the mammals of Pennsylvania. The work in the northwest section has advanced and should be completed by the end of August 1948. The party in that region has made a number of interesting finds, and in so doing has widened our knowledge of the range and habits of some small species which have always been considered rare or scarce mammals.

In conjunction with our desire to investigate every form of mammal known to exist in the state, the field party in the northwest has tracked down a colony of western, thirteen-lined ground squirrels. It is believed that a pair of these squirrels was introduced from the West many years ago, managed to escape, and the present colony is a result of that importation. Rumors of wolves and coyotes being shot in Pennsylvania have been rife during the past

year. Most of the animals examined were found to be mongrel dogs, or possibly coyote-dog crosses. Just recently, however, the Museum was presented with an animal shot in Elk County, which proved to be an old, and apparently full-blooded coyote. Here again this species was probably introduced into the state by well-meaning tourists or circuses, and managed to escape and thrive in the wild. Neil Richmond and his assistant have also kept in contact with fur trappers and dealers, and have investigated rumors of disease among valuable fur bearers.

On the first of August a second field party was started in the southwest sixth of the state, with William C. Grimm as leader. This party, too, has turned up some interesting and rare species and has widened our knowledge of our native fauna. The part of the state in which they are working is particularly notable for its small game, and every effort will be made to provide information about this important aspect.

It is our hope that we can provide the Pennsylvania Game Commission with detailed information about the relationship of the small mammals of the state to the larger game and fur-bearing species, information which will enable them to put more game in the fields and will permit the trappers to increase their take of the furcrop. The small mammals, as mice or shrews, all have their place in the economy of game management, for they are the prey on which the majority of the so-called "valuable" mammals live. Weasels, fox, and other carnivores, are greatly affected by the relative abundance or scarcity of small mammals, and when the supply gets too low they turn to domestic stock for sustenance and so interfere with man's economy.

U. N. SYMBOL

The Christmas carol festival given on December 14 by twenty-four choral groups of as many nationalities created in music a Yuletide atmosphere of good will to all men. Each of the two performances filled the two thousand seats of Carnegie Music Hall to capacity.

Seven hundred local singers, many of them in costume, took part under the direction of Marshall Bidwell. Howard L. Ralston was the accompanist and this eleventh annual program was arranged by Mrs. Samuel Ely Eliot. A reception for the singers was held by interested friends in Stephen Foster Memorial Hall at the close of the afternoon.

On this occasion the new United Nations flag was displayed for the first time in Pittsburgh, and possibly the first time anywhere in the world outside of the U. N. headquarters. This emblem, officially and unanimously adopted by the U. N. Assembly on October 20, shows a white outline map of the world viewed from the North Pole, ringed with olive branches in white, on a deep sky-blue field.

The flag was purchased at President William Frew's direction, to be added to Carnegie Institute's collection of the flags of many nations.

A DISTINGUISHED MUSIC FACULTY

By Anthony L. Antin Carnegie Institute of Technology

The photograph of Professors Malpi, Aitken, Lopatnikoff, and Dorian is more than just an interesting pictorial record of the meeting of four important music-world figures. It may well symbolize the Music Department of the Carnegie Institute of Technology today.

The professional success enjoyed by each of the professors gives strong indication of the professional nature of the department. The range of their talents is symbolic of the variety and scope of the music curriculum offered at Tech. And the academic setting of the photo quite graphically illustrates the success of the department and of Carnegie Tech in combining the academic with the professional.

Since its earliest days, when it organized the first collegiate course for bandmasters in the nation, the department has been progressive and ever alert to its educational responsibility. Today, in maintaining and further entrenching its position of leadership, it is continuing to develop. And this development is clearly marked by the increasing number of distinguished names on its faculty list and by its steadily widening curriculum.

The largest department faculty in the College of Fine Arts is headed by Charles A. H. Pearson, a Carnegie graduate and a member of the music department staff since 1925. Mr. Pearson, a well-known organist who has studied with Charles Marie Widor and Henri Libert in France, supplements his administrative duties with teaching and for twenty-three years has been organist and choir director of the Temple Rodef Shalom in Pittsburgh.

At the far left in the photograph is Maria Malpi, the European soprano who joined the faculty this fall. Just before coming to Carnegie, Miss Malpi was very active in radio and concert work in New York. On the Continent she sang in concerts and opera and taught singing in Switzerland, Germany, and Sweden. This new faculty member is a graduate of the Conservatory of Music at Basel, in Switzerland, and has studied in Munich with Proksch of the Music Academy there and in Berlin with the late Louis Bachner.

Seated next to Miss Malpi in the photograph is another important artist who joined the faculty this year. He is Webster Aitken, internationally famous pianist and, for this year, visiting professor of piano at Carnegie. Mr. Aitken made his professional debut in Vienna in 1929, appearing with the Vienna Symphony Orchestra. After a series of successful concerts all over Europe and a sensational London debut, he returned to the United States for his first American concert in Town Hall, New York. Since that time he has toured the nation and has appeared as a soloist with the Boston Symphony, the Los Angeles Philharmonic, the New York Philharmonic, and other noted symphony orchestras.

Nikolai Lopatnikoff, in the center, is a composer of symphonic works and has been hailed by critics as "one of the most gifted modernist composers." Associate professor of theory and composition at Carnegie Institute of Technology, Mr. Lopatnikoff has had his compositions presented by the major orchestras of Europe and the United States under the batons of such conductors as Gabrilowitsch, Koussevitzky, Reiner, Stokowski, and Bruno Walter.

At the right of the group is Frederick Dorian, professor of music and director of the student symphony and chorus. Dr. Dorian, the author of several books



MARIA MALPI, WEBSTER AITKEN, NIKOLAI LOPATNIKOFF, AND FREDERICK DORIAN GATHER AROUND THE PIANO

on music that were published abroad and of the American-published History of Music in Performance and, this past year, Musical Workshop, came to Carnegie in 1936, highly recommended by Eugene Ormandy. A native of Vienna, he received the Doctor of Philosophy degree from the University there and has studied at the State Academy of Music in Vienna. Before coming to America, he was music critic of the Neues Wiener Journal, the leading paper on musical subjects in central Europe, and he is now program annotator for the Pittsburgh Symphony Orchestra.

Absent from the photograph and from the Carnegie campus this semester is another noted personage associated with the Music Department faculty. Ria Ginster, celebrated European soprano, was visiting professor of voice last year, and it is expected that she will return to the campus in 1948. Considered one of the outstanding singers of lieder, Miss Ginster has toured both Europe and the United States and has appeared in this country with the New

York Philharmonic and the Chicago Symphony orchestras. In Switzerland she has been professor and head of the voice department of the Conservatory of Music at Zurich since 1937.

In addition to these, eight other fulltime and fourteen part-time faculty members all contribute to the strength of the department. On the staff are Goesta Andreasson, associate professor of violin and viola; Oleta A. Benn, associate professor of music education; Joseph C. Derdeyn, assistant professor of violoncello; Roland J. Leich, assistant professor of theory and composition; William A. Schaefer, assistant professor of music; H. Kloman Schmidt, assistant professor of piano; and Carolyn Kennedy and Matthew Frey, instructors in music.

The part-time faculty members, most of whom are first-chair men of the Pittsburgh Symphony, provide a large part of the instrument instruction in the department. This group is led by Hugo Kolberg, concertmaster of the Pittsburgh Symphony Orchestra.

Complementing the able faculty described above is the Music Department's carefully planned and well-balanced curriculum. And concrete evidence of the Department's continuous efforts to expand even further its curriculum was given recently with the addition of an option in composition.

Today students in the Music Department may select their course of study from four separate options or may combine two options for a double-major. After completing the prescribed freshman year, which is the same for all students, they may specialize in an instrument, voice, music education, or composition. Double-majors may be pursued with special permission by combining the study of an instrument or voice with music education or composition and by extending the study program to five years.

In all the options the student's technical equipment receives careful attention. Individual lessons are given on his major and secondary instruments, while ensemble experience is provided in the rehearsals and performances of the symphony orchestra, string ensemble, choruses, wind ensemble, and smaller chamber music groups. Confidence in playing in public is strengthened by frequent student recitals and orchestra

Classes in theory, solfeggio, history of music, form and interpretation, and Dalcroze eurythmics form the background of allied music subjects for all options. To these are added intensive academic courses, such as Thought and Expression, The Arts and Civilization, Psychology of the Individual, and Social Orientation. Languages are emphasized in the Singing Option, and in the Music Education Option the subjects stressed are Elementary and Secondary Methods, Practice Teaching, Chorus Conducting, and Score Reading, as well as educational subjects required by the Commonwealth of Pennsylvania for the certification of public school teachers.

The nontechnical subjects that form a portion of each year's program are an

integral part of the departmental plan and are in keeping with the general theory of education practiced at Carnegie. The presence of these nontechnical subjects in the curriculum provides ample evidence that the department, along with the entire school, is meeting outstanding success in blending the demands of professional training with the ideals of academic education.

ART ECHO

PEABODY High School advanced art students are exhibiting at the Carnegie Library of Pittsburgh this month. Twenty-four paintings in the entrance hallway reflect their fall visits to Painting in the United States, 1947—some in subject matter, some in style, and some in emotional appeal.

At least one trip to the fall show at Carnegie Institute was required, with class assignments from their instructor, Jean Thoburn, growing out of student observations. This year, for the second time, Board of Education field trips were planned for all high-school groups to attend in a body and study the exhibit, after hearing a very helpful and interesting explanation of the pictures with slides given by Mary Adeline Mc-Kibben, senior art supervisor of the schools.

This second annual display at the Library, arranged in collaboration with Janet Acheson, head of the James Anderson Room, is planned to demonstrate the appreciation of the advanced art students at Peabody High School for the exhibits at Carnegie Institute. For some of the students the particular painting that was studied in the fall exhibit acted only as a springboard, sending the pupil far afield from his original starting point. "The results, though uneven in quality," Miss Thoburn has commented, "are sincere reactions to contemporary painting and may lead to other, more valuable experiments in the future. The habit of attending other gallery exhibits often begins in this way.

BOYS, GIRLS, AND BOOKS

By VIRGINIA CHASE

Head, Boys and Girls Department, Carnegie Library of Pittsburgh

The public library is the most democratic institution in the United States today. In a central library building the whole population, young and old, able and infirm, scholar and uneducated, Republican and Democrat, capital and labor, sectarian and nonsectarian, meet on common ground and are served with equal interest and consideration. There is no age limitation, no law to regulate or classify its users. It is free to all, supported by all.

The children's department is the library's most democratic part. All respect is shown the child. He is not asked if he belongs to one district or another, or if he is rich or poor. He is not asked if he is Catholic, Protestant, or Hebrew, or if his parents are citizens. He feels free to come and go, to ask questions or to seek his own information. He may select books to take out or he may read in the room. He may stay five minutes or many hours. The library is not an institution to him, it is a friendly, warm place. It is a home.

The children's collection serves all ages and all interests conceivable to man. Boys and girls whose likes and dislikes are as varied as the children themselves find new worlds, new channels of thought, and are stimulated by the wonder in all things created, in books selected for them by an understanding librarian. For it is the desire of children's librarians to show all youth the joy to be found in books, and to give an appreciation for books, what they can mean to him, the reader. The joy found, once discovered, is never lost. To teach the joy obtainable in books, giving enrichment to life whether it be through the love of literature or through the ability to use books for one's specific interest, is the aim of all children's librarians worthy of the title.

The aim is high and the public is large. How does the children's librarian succeed in matching books with individuals? She needs to be practical. The more lofty her ideals, the more realistic she must be. A collection of wellselected books is a necessity. These books should cover all subjects, from aviation to zebras, and be suitable for ever-deepening interests as a child's comprehension grows. The books in libraries for adults are separated by subjects in various departments. Not so in the children's room: all must be near at hand, for children become confused by being referred from one department to another. The child expects his wants to be fulfilled readily and easily. They usually are. For that is the point behind good book selection. The librarian knows her children, she knows their likes and dislikes and anticipates every need. Her practical nature instinctively prevents her from offering a baseball story to an eager lad when both he and she know he wants the latest Spaulding rules of the game, even though there has been no indication to that effect. She dare not offer story for fact to a child who believes he has outgrown such material. There is nothing more sensitive than the growing mind, and if the librarian is to build up her public she honors this state of affairs. Through mutual understanding between librarian and child, the most effective and satisfactory method of reaching her aim is accomplished.

However, a very practical problem must be faced. Only a small percentage of boys and girls come to the library without an outside introduction. Thus it is that much of the librarian's work is done quite outside the library walls. She brings the library to the children by speaking to them in school classes,



YOUNG BOOK-BORROWERS KEEP THREE LIBRARIANS BUSY AT THE LENDING DESK OF THE BOYS AND GIRLS ROOM AT CARNEGIE LIBRARY OF PITTSBURGH

telling stories over the radio, working with organized groups such as the Boy and Girl Scouts and the churches. Indirectly shereaches them through adults interested in children, who in turn recommend good reading to boys and girls. Eventually more children reach the library for personal attention and service.

Story hours have become a regular activity of the children's department. It is by this means that the literature of the world is introduced. For the first time the child may hear of the wondrous adventures of Ulysses, the ring of Thor's hammer, the bravery of Beowulf, or the friendship of Roland and Oliver. He hears the tales that circled the world before man could write, the stories so old that no one knows their age: Cinderella, Sleeping Beauty, Jack the Giant Killer. The story hour is a period in this hurried world when children

enjoy the oldest of the arts, storytelling. Newer innovations are tried from time to time, puppet shows, pictures, plays, each successful in themselves but never taking the place in the child's heart for the story that is told. Always there is someone to remark, after some other form of entertainment, "Now please, tell us a story." It is little remarks of appreciation like this in which the librarian finds her reward. She has no tests and measurements by which she can measure her success; she has no graded system by which some children are rewarded and others are not; she has little way of knowing her actual accomplishment except by the appreciative "customer."

The librarian's day is busy. Frequently it begins with a school station. She circulates books to boys and girls all morning, books that have been lent to a school for a year. She hurries back

to the library to eat a quick lunch and prepare for a group coming for a book talk or specific subject material. She barely finishes with these children before it is half-past three and time for school to be out. No need to look at a clock. One minute the room is comparatively empty, the next it is a wild, rushing torrent of young humanity. The floodgates have been opened and a bombardment of questions is at hand, questions that would stagger all but the experienced librarian. The following list is a fair sample, taken from the report of a typical children's room, giving actual questions in exact sequence:

Do you have anything on Colonial

life?" (Age 8)

"I want pictures of Indians." (Age 7)
"Where is Lassie Come Home?" (Age 12)

"Have you anything on diction?"

(Age 15)

"What is the address of the magazine Children's Activities?" (Adult)

"I need designs for murals with

Pennsylvania Dutch themes." (Adult)
"Please get me The Doll Who Came
Alive." (Age 9)

"I want a Christmas play for fourth grade, not religious, and easy to stage." (Adult)

"Where are Hallowe'en stories for first grade?" (Adult)

"I want a picture showing the names of our teeth." (Age 9)

"Do you have Feet in the Ashes?"

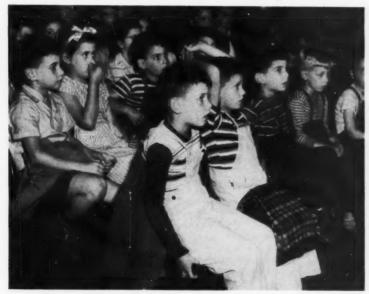
(Age 6)

"I want to know how to make a bakery out of orange crates." (Age 10) "What is the difference between a

male and a female goldfish?" (Age 11)
"How can I train my puppy? Mamma
says I can't keep him unless I do."
(Age 7)

And so it goes; one never knows what will come next. The librarian needs a flexible mind. She answers each in turn.

When closing time comes she is happy to go home to rest. Rest? Well, not yet, for it is during the evenings that she must read children's books. This does



ABSORBED ATTENTION IS GIVEN THE STORY TOLD BY A LIBRARIAN. STORY HOUR IS HELD REGULARLY IN THE BOYS AND GIRLS ROOM.

not mean skimming or skipping through a half dozen at once. She reads them carefully so that she will never shatter the faith children have in her when they ask for a book: "You know, the one that has a thrifty uncle in it;" or "The one about doughnuts." But she reads for more than just to be able to answer questions. There are satisfying elements found in children's books not discernible in adult literature. Paul Hazard of the French Academy said just before the war: "Children's books keep alive a sense of nationality; but they also keep alive a sense of humanity. They describe their native land lovingly, but they also describe faraway lands where unknown brothers live. They understand the essential quality of their own race; but each of them is a messenger that goes beyond mountains and rivers, beyond the seas, to the very ends of the world in search of new friendships. Every country gives and every country receives—innumerable are the exchanges—and so it comes about that in our first impressionable years the universal republic of childhood is born."

Yes, children's library work is gratifying; the children and the books make it so. It is a joy to bring the two to-

gether.

SPEAKING OF POTTERY

By JAMES L. SWAUGER

Custodian, Section of Archeology and Ethnology, Carnegie Museum

Pottery, porcelain, Sèvres porcelain, and English wares have recently

been grouped on display in the Gallery of Useful and Decorative Arts on the first floor of the Museum. The four exhibits will be discussed in separate articles in CARNEGIE MAGAZINE.

Pottery, generally speaking, is any kind of baked clay ware except porcelain, which will be discussed next month, and stoneware, which is composed of clay plus the admixture of a flint stone. The clay used has a slight calcareous content.

The body of pottery can be scratched with a steel knife, is always porous, and is opaque unless the clay has been ground to very thin flakes. Pottery is usually fired in an oven but it may, as in many American Indian wares, be sunbaked. Such names as earthenware, red ware, black ware, primitive ware, and terra cotta are synonymous with pottery.

The decoration is ordinarily painted on sun-baked pottery and applied in the glaze, or by incision or modeling in the oven-fired pottery. Another decorative



ITALIAN MAJOLICA LIDDED BOWL

technique with unglazed pottery is known as slipping, a process whereby a mixture of clay, frequently of the same type and color as that used for the body, is diluted to the consistency of thick cream and applied either in complete coverage or in pattern, and baked on.

There are many different kinds of pottery. Of the simple, unglazed pottery types there are displayed at the Museum a Korean earthenware footed vase, an Arabic pottery bottle, a Chinese terra-

cotta tile, a German pottery cup, and an Egyptian earthenware water bottle. The use of pottery for water bottles is due to pottery's porous property, for as water seeps or "sweats" through the sides, it evaporates and cools the water remaining. A reproduction of the famous Greek Attic ware or red ware, originals of which are displayed in the Gallery of Archeology on the third floor of the Museum, is presented in a large bowl.

Glazed pottery is usually produced with a lead glaze which may be transparent; when tin is added to the glaze, so that the body of the ware is completely hidden by the glaze, the product is known as delft, majolica, or faience. Glazed pottery pieces are shown in the Gallery of Useful and Decorative Arts from Palestine, Algiers, Hungary, Italy, Holland, Spain, and Tibet, along with several pieces of European origin of which the exact country of manufacture is not known. The delft and majolica pieces shown represent geographical distinctions only, for they, with faience, are interchangeable terms since the difference is one of locale, not manufacture; the word "delft," however, as now used is usually applied chiefly to tiles of blue and white, while the words "majolica" and "faience" are usually applied to the brightly colored peasant wares of Italy, Spain, and southern France. One interesting piece in the exhibit is the European shaving bowl with a curved segment to fit the neck of the person being shaved.

MANUSCRIPT GIVEN

GARDNER READ'S original pencil script of his *Pennsylvania Suite* has been presented to the Music Division of the Carnegie Library of Pittsburgh. The composition, which this prominent young American composer based on folk tunes collected in this area by Jacob Evanson, vocal supervisor in the Pittsburgh public schools, is dedicated to Fritz Reiner. It was presented for the first time by the Pittsburgh Symphony Orchestra under the baton of Dr. Reiner on November 21.

TREE OF THE MONTH



PITCH PINE

TREES exist in our rigorous climate because of various adaptations, one of which is the ability of the broadleaved varieties to pass the winter leafless and dormant.

The shedding of leaves by the formation of a layer of weak cells at the base of the petiole is a rather complicated process, but the native broad-leaved maples, elms, lindens, ashes, and others, are annually deciduous. The pines and their kin shed their leaves eventually, but mostly only after the needles are from three to ten years old.

In the Pittsburgh region there are eight native evergreen trees: red cedar, hemlock, balsam, black spruce, red spruce, the five-leaved white pine, two-leaved scrub, and the three-leaved pitch pine. Popular this year at Christmas were also the red pine with two long



needles in each bundle and the Scotch pine with two twisted needles. Some of our oaks are in a sense evergreen, live oaks. Frost catches them before the weak cells are complete, and thus the dead dry leaves rustle on the branches all through the winter. —O. E. J.

OLD LAMPS THAT ARE NEW

George L. Ball Memorial Collection of Lighting Devices. The Collection,

which was presented by Mrs. Ball to Carnegie Museum last spring, is on display in the Hall of Useful and Decorative Arts.

Some years ago, as a result of their interest and onetime ownership of the finest Hereford cattle herd in Allegheny County, Mr. and Mrs. Ball and their son Hiram Ball made a trip to the Hereford area on the border of England and Wales where this breed of cattle originated. Never forgetting their other hobby of collecting, they found there a very interesting lighting device that combines two of the oldest sources

of light—the resinous wood splinter and the candle. The specimen, now given to the Museum, is of handwrought iron in the form of a pair of pincers, the tongs of which hold the splinter. One handle can be stuck into a block of wood, while the other is bent and bears a holder for a candle. The fuel for this type of lighting was plentiful in the Hereford district: the wooded mountains of Wales supplied the splinter, and the cattle of the district furnished suet for the tallow.

Anyone who studies the lighting equipment of the past will soon be impressed by the large number of small and miniature lamps that were made. This is especially true of the coal-oil or kerosene types. A very handsome lamp with a blue font and metal base of this sort has now been added to the

MRS. LILIAN I. BALL has recently collection. When a small lamp of this given four more specimens to the kind was used in the bedroom it was called a night light, but if used in the parlor it was known as a sparking lamp.



ADDED TO THE GEORGE L. BALL MEMORIAL COLLECTION

Not many years ago a home using kerosene for light was incomplete without a hanging lamp or two. Even this type was made in miniature, and the Collection is fortunate in receiving a very small and interesting specimen. It has a metal font, a white glass shade, and three small chains for hanging.

One of the most desirable of the old lamps is the tall glass type equipped to burn either whale oil or camphene. Collectors of lamps, glass, or antiques in general are always anxious to secure them. Especially is this true if the lamp is a pressed one of the Horn of Plenty pattern. Both McKee Brothers of Pittsburgh and the Boston and Sandwich Company used this design. The lamp in question, a worthy addition to the Ball Collection, was probably made at Sandwich and not in Pittsburgh.-E. R. E.



THE GARDEN OF GOLD



The closing months of the year saw a number of generous gifts to Carnegie Institute of Technology and to

Carnegie Institute.

The Department of Printing Scholarship Fund at Carnegie Tech is the recipient of \$1,000 given by the Herbick and Held Printing Company of Pittsburgh. This amount added to previous gifts for the Scholarship Fund from Herbick and Held makes a total of \$4,000 from that firm.

The Pittsburgh Chapter of the American Institute of Architects has recently presented \$300 to the Stewart L. Brown

Memorial Scholarship Fund.

To date a number of United States Savings Bonds have been given by Harold J. Apell for the Norman Apell Memorial Scholarship Award. By this award, \$200 is presented each year to the outstanding senior in the School of Drama of Carnegie Tech. The Award, which was established in memory of Sergeant Norman Apell who died in France in 1944, has reached a total of \$3.842.

Gifts of less than \$100 for the Tech Endowment Fund received during No-

vember amount to \$108.

Richard K. Mellon has presented \$5,000 to the Carnegie Museum.

F. W. Preston has given \$1,000 to assist in the publication of *Flora of Western Pennsylvania*, for which Dr. O. E. Jennings has prepared the text and Dr. Andrey Avinoff, the illustrations.

James C. Rea has presented \$100 to the Museum for work on the Mammal

Survey.

The following names are to be added to the honor roll of contributors to the David H. Light Memorial Record Library of the Carnegie Library of Pittsburgh: Mr. and Mrs. John Robb Allison, Burton J. Apple, Thomas P.

Beegle, Jr., William H. Beegle, Kathryn Brose, Mrs. Emil Bund, Mrs. B. Z. Cashman, William Colbert, Mrs. Priscilla W. Collins, H. Marie Dermitt, Mrs. L. E. Egerman, Henry O. Evans, Mrs. M. H. Fisher, Dr. Solomon B. Freehof, Mr. and Mrs. Emanuel Fried, Philip R. Gillespie, Susan Gillespie, Fred Givelber, Ruth Hadburg, W. B. Hamilton, Mrs. Clifford S. Heinz, Mrs. John P. Hoelzel, Dr. Casper P. Koch, Mrs. Alexander Lowry, Frances H. Kelly, Daniel Malakoff, Mrs. P. Millen, Mrs. B. Mishelevich, Ralph Munn, Mrs. F. J. Newman, Mrs. Irwin M. Pochapin, Mrs. Victor Saudek, Mrs. Harold M. Seder, and George Seibel.

THE BOLD IN HEART

Two new clubs for hardy adventurers have been organized and are meeting

in the Carnegie Museum.

The Explorers Club, open to adults interested in any phase of exploration, will hold its second meeting in the Children's Museum at 8:00 P.M., January 13. Twenty-four persons attended the first meeting, and rules of the organization are now being drawn up. Ivan L. Jirak is chairman.

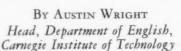
The Pittsburgh Grotto of the National Speleological Society will hold its next regular meeting in the Herpetology Laboratory on Sunday afternoon, January 11, at 2:15 p.m. The Society, according to M. Graham Netting, 'is intended for anyone interested in cave crawling.' The group took its second field trip the last Sunday of December to Barton's Cave near Uniontown. J. R. Fisher heads the Speleologists, who now have twenty-two on their roll.

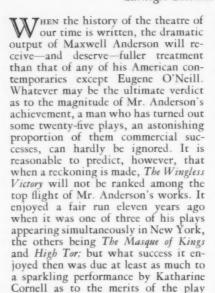
Both groups cordially invite anyone interested in their programs to join with them.



irself

THE PLAY'S THE THING'





The Wingless Victory was given a splendid production last month by the Department of Drama. Directed by Mary Morris with sympathy and acumen, and played against beautiful sets designed by Albert Heschong, the performances attained a high level of quality, and Mr. Anderson's bitter denunciation of racial prejudice and religious bigotry and his moving if sometimes turgid presentation of one tragedy stemming from them were given eloquent expression.

The story concerns a seafaring New Englander, Nathaniel McQueston, who returns to his Salem home in 1800 after an absence of seven years, bringing with him a fortune "reaped on the outlands of the moon somewhere," a handsome Malay wife, and two dusky

children. The fortune is most welcome. since it comes just in time to buttress the sagging timbers of the family financial structure, but the wife Oparre, though she was a princess in her native land, is received with hostility by her husband's mother and his preacherbrother Phineas. Only a wastrel younger brother, Ruel, and the Salem girl whom Nat had left behind and forgotten, Faith Ingalls, show any friendliness to the newcomers. The impulsive and generous but rather wooden-headed Nat foolishly tries to buy the good will of his bigoted neighbors by lending money right and left, but succeeds only in miring himself in financial difficulties. Meanwhile the contemptuous attitude of his family and all of Salem toward Oparre has had the effect of turning him slowly against her, while she suffers increasingly from living in physical and spiritual isolation from all except Nat and her children and her single Malay servant. The discovery that Nat has achieved his fortune by means which constitute technical piracy puts him in his enemies' hands, and he is given the choice of sending Oparre and the children back to her homeland or going with them himself with empty pockets. Dismayed at the prospect of attempting a fresh start against insuperable odds, and secretly half-relieved to have the knot cut that binds him to Oparre, he cravenly agrees to the separation. Oparre, in the cabin of the ship that is to sail next morning, destroys her children and commits suicide. The repentant Nat arrives too late to forestall the catastrophe.

This dark drama of miscegenation and intolerance has a considerable impact and is possessed of moments of tragic beauty; as produced by the De-



STUDENT ACTORS IN A SCENE FROM "THE WINGLESS VICTORY"

partment of Drama it was an impressive parable of man's inhumanity to man. Yet it leaves one with a feeling of dissatisfaction. It is long and sometimes painfully verbose: each of the first two acts requires nearly a solid hour of playing time, and there are passages that cry aloud for cutting. The character of Nat McQueston is highly unsatisfactory, and that of Oparre is just as highly improbable. Even as ingenuous and unimaginative a man as Nat would hardly have expected his foreign family to encounter no difficulties in Salem, or have proved so foolish about money matters; then too, his revulsion from his wife is dramatically unmotivated and, one guesses, not convincing even to Mr. Anderson. Oparre is as unrealistic as a Scott or Dickens heroine, though with a difference! Some things that the McQuestons say and do are farfetched. One feels confident, for example, that Mrs. McQueston would not have spit upon the unmarried mother who is for mysterious or at best unsatisfactory reasons introduced into the first scene, and it is hard to imagine Phineas speaking to Nat with such vulgar and offensive frankness about his brown wife. After all, the New England clergy were not so intolerant or so sure of themselves at the time of this play as they had been a century earlier; Channing was twenty in 1800, and Emerson was to be born a few years later. And would Mrs. McQueston, seeing her own grandchild kneeling at a chair, say in suppressed rage to the child's mother, "Must she touch my chair?" In Act III Mr. Anderson feels the necessity of introducing other characters than Oparre and the faithful servant Toala, and so brings in young Ruel and a sympathetic friend-unwisely, in my opinion. Nat of course must reappear, but his repentance is not much more convincing than his earlier cowardice, and the final remarks by Nat and Ruel over the body of Oparre leave

something to be desired.

The part of Oparre is a rich one containing enough difficulties to offer a challenge to any actress, including Miss Cornell. In both casts at Tech it was played with what seemed to me distinguished success. The actresses portrayed skillfully the wise, patient Oparre of the first act; the restless and lonely woman who gradually comes to long wistfully for social acceptance even though it means no more than admission to petty sewing circles where making clothes to cover heathen nakedness competes for interest with local gossip; the savage who lashes Nat for his treachery; the heartbroken mother who perceives too clearly the evil in store for herself and her children to hope for refuge in any other haven but death. Though Oparre's important speeches are sometimes rhetorical and overwritten, she is given the most beautiful lines in the play. One of the best scenes is that in the cabin of *The Wingless Victory* between Oparre and Toala, when the devoted servant confesses that she has always carried and cherished a phial of poison because she has known that there must come a time for its use. The Oparre of the first cast, with the help of a completely realistic Toala, made this scene particularly moving.

The first Nat was a handsome, debonair, rather boyish figure, appealing in his bewilderment and helplessness as the forces of hatred and intolerance wore him down. The actor made too free use of his hands, however, and overdid the vigorous bluntness and sailor heartiness which belong in moderation to the character. He cried to Oparre, "This dress is new," almost the same emphasis he used in the most emotional speeches. The second Nat seemed older and more fitted to cope with the insoluble problem facing him; perhaps for that reason his failure to stand by Oparre seemed doubly reprehensible.

The Reverend Phineas whom I saw in both performances was excellent—grim, domineering, hopelessly bigoted, a fanatic who would have been a witch-hunter had he lived a century earlier. The actor gave a masterful performance that brought out clearly the fact that, though Phineas is despicable, he at least is sincere and honest according to his lights: he is truly interested far less in Nat's wealth than in the salvation of

his brother's soul.

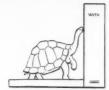
There is little to the role of Mrs. McQueston after the opening act, but that was sufficient for the actress who played the role in the first cast to impress herself upon the memory of the audience by a strong performance. The part contains several memorable speeches that must make it attractive to an actress. The second Mrs. McQueston lacked the uncompromising strength and bitterness of the first, and indeed was far too pliant and agreeable. In this cast one felt that if Nat could win

Phineas to his side or, failing that, conquer him, he would have comparatively little difficulty with his mother; but the playwright has clearly intended the mother to be every bit as hard and unyielding as Phineas, perhaps more so.

Ruel McQueston is also at his best in the first act, where his cheerful irreverence and jaunty witticisms lend welcome flashes of humor to a prevailingly melancholy pattern. This Ruel is far more believable than the reformed rake who, overcome by Oparre's virtuous beauty and angry at her unjust defeat at the hands of people whom he detests, offers her at the end "what's left of a life." This role was well handled in both casts, with the first Ruel perhaps more successful in the bantering, flippant speeches of the early

cenes.

There were two engaging performances in the role of Happy Penny, the sailor who serves in a catalytic capacity by spreading the news of Nat's marriage and later informing the audience of the discovery that brings about the charge of piracy against Nat. It seems a little naive for Mr. Anderson to point out soberly, through Ruel, that Penny is called Happy because his real name is Merriment! According to the program I saw different actresses in the minor but appealing part of Venture, the meek wife of Phineas, but if so the performances must have been nearly identical; no doubt this fact is a tribute to the actting and direction, for certainly the timid Venture, though she was played in a touching manner, should not loom too importantly in one's memory. There was a charming little Durian, the child of Nat and Oparre. The pleasant role of Faith Ingalls seems only partially realized, though she does serve the useful purpose of providing at least passive support for Nat and Oparre. There is not room to develop the theme of her relationship to Nat, for the play is already too long; and though the audience is grateful for her presence, dramatically she might well be eliminated.



THE SCIENTIST'S BOOKSHELF

By M. GRAHAM NETTING

Curator of Herpetology, Carnegie Museum



FISHERY RESOURCES OF THE UNITED STATES. EDITED BY LIONEL A. WALFORD. Washington:
Public Affairs Press. 1947. Photolithoprinted, 134 p., numerous illustrations. \$5.00. Carnegie Library call no. q639 U25.

HERE are two major threats in the world today, either one of which would cause incalculable loss of human life, if not the breakdown of the entire structure of our civilization. The first is the misuse of atomic energy. Everybody everywhere knows about that now, so presumably steps will be taken to ward off that perilous danger. The other is the continuing destruction of the natural living resources of this earth." This thought-provoking statement was not made by a rabble-rousing alarmist, but by Fairfield Osborn, president of the New York Zoological Society, in an address to the eleventh North American Wildlife Conference in

The urgency of curbing man's wastage of God's bounty of natural resources is not fully appreciated by the public at large because so many of the statistics that offer irrefutable proof of declining resources are buried in scientific reports. Dr. Walford has taken an important step in presenting in readable form upto-date information upon the status of the aquatic resources of the United States and its territories, drawn from investigations of the United States Fish and Wildlife Service.

Every important aquatic species, as judged by a commercial catch of two million pounds or more annually, is discussed in this book, and many lesser species are treated also. The term 'fishery resources' is used broadly, furthermore, to include not only fishes but also fur seals, clams, oysters, crabs, lobsters, shrimp, squid, turtles, whales, bullfrogs, seaweeds, and sponges.

The book opens with a double-page,

outline map of North America-unfortunately based on a projection illsuited for this use-around which are grouped brief statements of the fishery resources of each region. No better introduction could have been contrived, for the reader learns at once that: "Alaska, whose principal industry is fisheries, is the chief production center of salmon, most valuable fishery resource of the United States. . . . The South Pacific coast receives the greatest volume of fish landed anywhere in America. Foremost fishery is for the sardine, the largest fishery resource in the western hemisphere. . . . A large New England shore industry is devoted to filleting, packaging and quick-freezing the bank fishes. . . . The Middle Atlantic States lead in the packing of shucked oysters and fresh-cooked crab meat and the manufacture of fish meal and oil. . . . The South Atlantic and Gulf States are the seat of the largest shrimp fishery in the world.

Beginning with the Pacific salmons, each fishery of the west coast is discussed, with major emphasis upon the rise or decline of the industry, what is known about the fishes, and what needs to be learned in order to institute a sound conservation program. In each instance the text is supplemented with an outline map showing the distribution of the fishery, generalized drawings of the fish, and whatever graphs or other illustrations are needed to augment the text. The same treatment is followed for the Atlantic, fresh-water, and territorial fisheries.

I can only hint at the variety of fishes discussed in this book and it would

take a Don Blanding to do poetic justice to their names. There are alewives and menhaden, weak-fish and swordfish, kingfish and queenfish (both croakers), horse mackerel and sheepshead, rosefish and whiting, butterfish and sea dab, silversides and grayling, snook and scup, flounders and suckers, and many others tempting a reviewer to stray into the pleasant bypaths of etymology.

Unwittingly nearly everyone is interested in albacores, skipjacks, yellowfins, and bluefins, for these fishes are the only legitimate source of the main ingredient of tunafish salad. Although tuna-fishing is very ancient, one of the few fundamental questions that has been definitely settled is that California tunas are best for canning although Florida tunas attain greater size. This industry demonstrates that sound conservation must be international, for tunas migrate such vast distances that the activities of Japanese canneries on Saipan may affect the luck of sportsmen off Catalina.

The fur seal provides a good example of a species that has made a satisfying comeback from the brink of extermination. In 1867, when Alaska was purchased, about three million seals summered on the rocky shores of the Pribilof Islands. Unrestricted butchery ashore and killing at sea-where sealers can't differentiate the sexes and seals don't care to—reduced the herd to about 130,000 animals. Since 1910-11 when the government assumed guardianship and pelagic sealing was prohibited by international agreement, the herd has increased to almost three million, in spite of the annual harvesting of surplus bachelors, who make the best coats anyway!

The American lobster, which reaches a top weight of forty-five pounds and top billing upon many a menu, is the third most valuable marine resource in New England waters and the chief source of revenue, tourists excepted, of many small seacoast towns. In spite of efficient hatcheries and overlapping legal restraints, however, the annual

catch has dropped from thirty million pounds in 1800 to about eleven million in recent years. This reduced catch will satisfy more epicures, however, when greater attention is paid to conserving lobsters after they are landed, for handling and transit losses are high.

It should be easy to spy upon the home life of sponges because, following a brief larval existence, these future companions of the bath attach themselves to rocks and never stray. Until such detective work is done, however, practical recommendations for fostering our Florida sponge fishery cannot be made. The sponge's remarkable ability to grow from a small cutting suggests that there may be lucrative opportunities for a few sponge farmers patient enough to wait three or four years to harvest a crop that requires neither cultivation nor fertilization.

The green color used for the illustrations provides contrast with the text but affords less satisfactory definition than the conventional black used in the 1945 Office of War Information edition. The book ends with a graphic presentation of the economics of United States fisheries and an index.

If we don't succeed in restricting the use of atomic energy to peacetime pursuits this book will not be important, for there won't be enough of us left to deplete the fishery resources of the world. I am confident we will control atomic energy, however, and therefore, I am most anxious that Dr. Walford's book be widely used and acted upon. I want my son, and all his generation, to enjoy the things that I have enjoyed. Trolling in rough water in the Pacific, trout-fishing on a placid mountain lake, crabbing on the Jersey coast, enjoying fish frys in Florida, eating savory pompano on a trade-wind-swept balcony in Panama-these and a hundred other memories compounded of waters near and far, good companionship, and fish hoped for or landed, can be enjoyed by future Americans only if we zealously protect our heritage of fishery resources.

INCIDENTALLY

The new Art and Nature Shop on the first floor of Carnegie Institute has been enjoying a happy and prosperous holiday season. Some of the more popular items on sale are proving to be: Indian arrowheads, first; Mexican feather pictures, second; and third, the illustrated thirty-five-cent pamphlets on natural history subjects for children.

An exhibit of paintings by Samuel Rosenberg is being held in New York City at the Associated American Artists Galleries from December 22 to January 17.

Andrey Avinoff's sixty paintings showing hybrids of Cattleya orchids were on view at the American Museum of Natural History until January 5.

Flower paintings by Dr. Avinoff are exhibited in a one-man show at Cranbrook Academy, near Detroit, beginning January 2, and several of his water colors are on view at the Art Gallery in Palm Beach.

Our collective face was red after the December issue of Carnegie Magazine appeared. Elizabeth W. Cameron wrote regarding the poem, "See what a lovely shell," that was quoted in this section, as follows: "You have attributed this poem to William Wordsworth, but it was written by Alfred, Lord Tennyson, and is part of his long poem Maud." Miss Cameron is, of course, correct.

To J. J. Lankes, of Hilton Village, Virginia, we must apologize for the omission of his name as a prize-winner in the 1947 Pennell annual print competition at the Library of Congress, from which the Institute's print exhibit was drawn. This was an oversight for which we are extremely sorry. His wood engraving Winter, which won the award, was on display in the Fine Arts Galleries in the annual showing that lasted until December 29.

-3 D-The ten-year agreement set up in New York City by the Metropolitan Museum, the Museum of Modern Art, and the Whitney Museum of American Art seems such a satisfactory agreement that we wish to congratulate them upon it. As reported recently in Harper's Bazaar, the Metropolitan is to devote itself to art of the past, both American and foreign; the Museum of Modern Art will still be dedicated to the modern art of all nations; and the Whitney will concentrate on American painting, sculpture, prints, and drawings. The Metropolitan will look to the Modern Museum and the Whitney for guidance on its contemporary acquisitions. Under this pact, as in the arrangement between the Louvre and the Luxembourg, modern art of established value periodically moves up town to the Metropolitan, thus enabling Modern Museum more liberally to purchase and exhibit the work of the younger artists.

Visitors to Carnegie Institute and Carnegie Library of Pittsburgh numbered 91,943 in November, and 51,644 in December.

CARNEGIE LIBRARY OFFICERS AND COMMITTEES

WILLIAM FREW, President
WILLIAM WATSON SMITH, Vice President
A. L. WOLK, Secretary
THOMAS L. ORR, Treasurer

LIBRARY COMMITTEE

A. L. Wolk, *Chairman*John F. Casey H. B. Kirkpatrick

Walter R. Demmler William S. Moorhead

BUILDINGS AND GROUNDS COMMITTEE

John F. Casey, *Chairman* Arthur E. Braun John T. Duff, Jr. Thomas J. Gallagher

FINANCE COMMITTEE

ARTHUR E. BRAUN, Chairman JOHN F. CASEY THOMAS L. ORR

AUDITING COMMITTEE

FREDERICK G. BLACKBURN, Chairman WILLIAM S. MOORHEAD A. L. WOLK

·3 D.

STAFF

RALPH MUNN, Director MARTHA V. WIRTH, Executive Secretary WILLIAM W. BRYAN, Assistant to the Director ENID McP. BOLI, Readers Consultant MARIE A. DAVIS, Public Relations

DEPARTMENT AND DIVISION HEADS

Adaline Bernstein, Order
Virginia Chase, Boys and Girls
Catherine G. Hay, Art
Katherine E. Crumrine, Central Lending
Rose Demorbst, Pennsylvania
Agnes Krarup, Schools
Ellwood H. McClelland, Technology
Ruth D. McCollough, Catalogue
Alice T. McGirr, Reference
Irbre Millen, Music
Arthur D. Scott, Printing and Binding
Laura E. Cathon, Central Boys and Girls

The Carnegie Institute, in the broadest sense, holds its possessions in trust for mankind and for the constant welfare and happiness of the race. Anyone, therefore, who by a gift of beautiful works of art, or objects of scientific value, or a donation to its financial resources, aids in the growth of these collections and the extension of its service is contributing substantially to the glorious mission of the Institute.

CARNEGIE INSTITUTE

OFFICERS AND COMMITTEES

WILLIAM FREW, President ROY A. HUNT, Vice President AUGUSTUS K. OLIVER, Secretary THOMAS L. ORR, Treasurer

MUSEUM COMMITTEE

RICHARD K. MELLON, Chairman
FREDERICK G. BLACKBURN H. J. HEINZ II
GEORGOE H. CLAPP W. L. MELLON
WALTER R. DEMMLER
JOHN T. DUFF, JR.
HOWARD N. EAVENSON
FREDERIC SCHAFFER
LAWRENCE C. WOODS, JR.

FINE ARTS COMMITTEE

ROY A. HUNT, Chairman

EDWARD DUFF BALKEN
J. FREDERIC BYERS
ROBERT E. DOHERTY
HOWARD N. EAVENSON
DAVID L. LAWRENCE
WILLIAM WATSON SMITH

RULLIAM S. MOORHEAD
AUGUSTUS K. OLIVER
THOMAS L. ORR
CHARLES J. ROSENBLOOM
FREDERIC SCHAEFER

AUDITING COMMITTEE

FREDERICK G. BLACKBURN, Chairman WILLIAM S. MOORHEAD A. L. WOLK

FINANCE COMMITTEE

ARTHUR E. BRAUN, Chairman
JOHN F. CASEY THOMAS L. ORR
ROY A. HUNT JAMES C. REA
WILLIAM M. ROBINSON

PENSION COMMITTEE

HOWARD N. EAVENSON, Chairman
H. J. Heinz II Augustus K. Oliver
Edward J. Leonard James C. Rea

MUSIC HALL COMMITTEE

WILLIAM P. WITHEROW, Chairman

JOHN F. LABOON JOHN LESTER PERRY

EDWARD J. LEONARD JAMES C. REA

ADVISORY COMMITTEE

FREDERICK G. BLACKBURN RICHARD K. MELLON
ARTHUR E. BRAUN
JOHN F. CASEY
HOWARD N. EAVENSON
ROY A. HUNT
A. L. WOLK
TECHNOLOGY
A. WILLIAM P. WITHEROW
A. L. WOLK

STAFF

WILLIAM FREW, President

J. C. Jeppries, Auditor Melva Z. Bodel (Mrs. C. G.), Assistant Treasurer Minnie C. Rankin, Secretary to the President

DEPARTMENT OF FINE ARTS

HOMER SAINT-GAUDENS, Director JOHN O'CONNOR, JR., Assistant Director ANNE K. STOLZENBACH, Secretary MARGARET M. LEE, Director of Educational Work

CARNEGIE MUSEUM

O. E. Jenninos, Director
Andrey Avinoff, Director Emeritus
John Clark, Curator of Physical Geology
J. Kenneth Doutt, Curator of Mammalogy
E. R. Eller, Curator of Invertebrate Paleontology
and Historical Geology
Ottmar F. von Fuehrer, Staff Artist
Arthur W. Henn, Curator of Ichthyology and
Editor
Leroy K. Henny, Curator of Botany
J. Leroy Kay, Curator of Vertebrate Paleontology
M. Graham Netting, Curator of Herpetology
Walter R. Sweadner, Curator of Entomology
Arthur C. Twomey, Curator of Ornithology
Anne Patricia Wallgren, Librarian

CARNEGIE MUSIC HALL

Marshall Bidwell, Organist and Director of Music Roy B. Ambrose, Manager

DEPARTMENT OF BUILDINGS & GROUNDS ROY B. Ambrose, Manager Mary C. Hardy, Secretary

BEQUESTS

In making a will, money left to the Carnegie Institute, the Carnegie Institute of Technology, or the Carnegie Library of Pittsburgh, should be covered by the following phrase:

I do hereby give and bequeath to the CARNEGIE INSTITUTE (or)

CARNEGIE INSTITUTE OF TECHNOLOGY

CARNEGIE LIBRARY OF PITTSBURGH in the City of Pittsburgh, Pennsylvania

. Dollars

Note: The President is ex officio a member of all Committees.

CARNEGIE INSTITUTE OF TECHNOLOGY

WILLIAM FREW, Chairman ROY A. HUNT, Vice Chairman AUGUSTUS K. OLIVER, Secretary THOMAS L. ORR, Treasurer

ROBERT E. DOHERTY, President

EXECUTIVE COMMITTEE

WILLIAM FREW, Chairman Augustus K. Oliver, Secretary Frederick G. Blackburn*F. B. Jewett

WALTER J. BLENKO *AN
WALTER R. DEMMLER
ROBERT E. DOHERTY *ROS
HOWARD N. EAVENSON
YJ. C. HOBBS
THE
ROY A. HUNT *CH.

*Anthony J. Kerin John F. Laboon *Roswell Miller William S. Moorhead Thomas L. Orr *Charles E. Wilson

WILLIAM P. WITHEROW (*Nontrustee members)

AUDITING COMMITTEE

Frederick G. Blackburn, Chairman William S. Moorhead A. L. Wolk

FINANCE COMMITTEE

ARTHUR E. BRAUN, Chairman

JOHN F. CASEY ROBERT E. DOHERTY WILLIAM FREW ROY A. HUNT THOMAS L. ORR JAMES C. REA

STAFF

ROBERT E. DOHERTY, President ELLIOTT DUNLAP SMITH, Provost H. R. PATTON, CONTROLLER MELVIN J. VOIGT, Librarian

COLLEGE OF ENGINEERING AND SCIENCE Webster N. Jones, Director William R. Work, Assistant Director

DEPARTMENT HEADS

J. C. WARNER, Dean of Graduate Studies

CARL C. MONRAD, Chemical Engineering
FREDERIC T. MAVIS, Civil Engineering
B. R. TEARE, JR., Electrical Engineering
WILLIAM R. WORK, Acting Head, Management
Engineering
DENNISTOUN W. VERPLANCK, Mechanical Engineering
ROBERT F. MEHL, Metallurgical Engineering
J. C. WARNER, Chemistry
John L. Synge, Mathematics
FREDERICK SEITZ, Physics
BRUCE BUTTLES, Printing

Geometry

COLLEGE OF FINE ARTS

B. Kenneth Johnstone, Director

DEPARTMENT HEADS

B. Kenneth Johnstone, Architecture Henry F. Boettcher, Drama

CHARLES A. H. PEARSON, Music W. A. READIO, Painting and Design JOSEPH BAILEY ELLIS, SCUIPTURE

MARGARET MORRISON CARNEGIE COLLEGE

EDITH M. WINCHESTER, Director

DEPARTMENT HEADS

HAROLD L. LANG, General Science CALLA VAN SYCKLE, Home Economics EDITH M. WINCHESTER, Secretarial Studies

MARY CLARKE BURNETT, Social Work

ROBERT D. GREGG, Acting Head, General Studies

DIVISION OF HUMANISTIC AND SOCIAL STUDIES

GLEN U. CLEBTON, Director

ELLIOTT DUNLAP SMITH, Maurice Falk Professor
of Social Relations

DEPARTMENT HEADS

G. LELAND BACH, Economics

Austin Wright, English Robert D. Gregg, History

WILLIAM F. KAMMAN, Modern Languages B. von H. GILMER, Psychology and Education

CARNEGIE LIBRARY SCHOOL

RALPH MUNN, Director Frances H. Kelly, Associate Director

COAL RESEARCH LABORATORY

H. H. Lowry, Director

METALS RESEARCH LABORATORY

ROBERT F. MEHL, Director

RESERVE OFFICERS TRAINING CORPS

COLONEL HAROLD A. KURSTEDT, Professor of Military Science and Tactics

DIVISION OF STUDENT PERSONNEL AND WELFARE

Douglas F. Miner, Director

DIVISION OF PHYSICAL WELFARE

CLARENCE OVEREND, Chairman of Administrative Committee

ALUMNI FEDERATION

JOHN L. ELLIOTT, Executive Secretary

DEPARTMENT OF PUBLIC RELATIONS
STANLBY R. MARCH, Director

Drawing and Descriptive

BOARD OF TRUSTEES

Under the charters the same thirty-six trustees serve both the Carnegie Institute and the Carnegie Institute of Technology, and eighteen of them (starred) are also trustees of the Carnegie Library.

EDWARD DUFF BALKEN
Princeton. Art.

Frederick G. Blackburn
Yale. Carnegie Institute of Technology. Vice
President, Mellon National Bank and Trust
Company. Museum, Tech, Auditing, Advisory.

WALTER J. BLENKO
Carnegie Institute of Technology. Law School Duquesne University. Stebbens, Blenko & Webb. Tech.

*ARTHUR E. BRAUN Chairman, Farmers Deposis National Bank. Buildings and Grounds, Finance, Advisory.

*J. FREDERIC BYERS
Yale. Chairman, A. M. Byers Company. Art.

*John F. Casey

Duquesne University. Chairman, John F. Casey
Company. Library, Buildings and Grounds, Finance, Advisory.

GEORGE H. CLAPP University of Pittsburgh. President, Board of Trustees, University of Pittsburgh. Museum.

*Walter R. Demmler City Council. Library, Museum, Tech.

ROBERT E. DOHERTY University of Illinois. President, Carnegie Institute of Technology. Tech, Art.

*John T. Duff, Jr.

Law School University of Pittsburgh. City
Council. Museum.

HOWARD N. EAVENSON
Swarthmore. Mining Engineer. Museum, Pension,
Tech, Art, Advisory.

*WILLIAM FREW Yale. Law School University of Pittsburgh. Trustee, Carnegie Corporation of New York.

*THOMAS J. GALLAGHER
City Council. Buildings and Grounds.

H. J. HEINZ II Yale. President, H. J. Heinz Company. Museum, Pension.

Roy A. Hunt Yale. President, Aluminum Company of America. Art, Tech, Finance, Advisory.

*Thomas E. Kilgallen
Duquesne University. President, City Council.
Music Hall.

*H. B. KIRKPATRICK
University of Illinois. President, Pittsburgh
Board of Public Education. Library.

JOHN F. LABOON

Carnegie Institute of Technology. Consulting
Engineer. Chairman of the Board, Allegheny
County Sanitary Authority. Tech, Music Hall.

*DAVID L. LAWRENCE Mayor of Pittsburgh. Art.

*Edward J. Leonard City Council. Music Hall, Pension.

RICHARD K. MELLON
Princeton. Chairman of the Board, Mellon
National Bank and Trust Company. Museum,
Advisory.

*W. L. MELLON Chester Military Academy. Chairman, Gulf Oil Corporation. Museum.

*WILLIAM S. MOORHEAD Yale. Law School University of Pittsburgh. Moorhead & Knox. Tech, Library, Art, Auditing.

Augustus K. Oliver Yale. Art, Pension, Tech, Advisory.

THOMAS L. ORR

Hamilton. Vice President, Mellon National
Bank and Trust Company. Art, Tech, Finance,
Advisory.

JOHN LESTER PERRY
Assistant to the President, United States Steel
Corporation. Music Hall.

JAMES C. REA Princeton. Vice President, Oliver Iron and Steel Corporation. Museum, Music Hall, Pension, Finance.

*WILLIAM M. ROBINSON
Princeton. Law School University of Pittsburgh.
Reed, Smith, Shaw & McClay. Finance.

CHARLES J. ROSENBLOOM
Yale. President, Rosenbloom Finance Corporation.
Art.

Frederic Schaefer
University of Pittsburgh. President, Schaefer
Equipment Company. Museum, Art.

*WILLIAM WATSON SMITH Princeton. Smith, Buchanan & Ingersoll. Art, Advisory.

*Frederic G. Weir Princeton. Law School University of Pittsburgh. City Council.

WILLIAM P. WITHEROW
Yale. President, Blaw-Knox Company. Music
Hall, Tech, Advisory.

*A. L. WOLK

Columbia University. Law School University of
Pittsburgh. City Council. Auditing, Library,
Advisory.

LAWRENCE C. WOODS, JR.

Princeton. Manager, Woods Agency, Equitable
Life Assurance Society of United States. Museum.

192}

